

Surface Area Calculations  
of Pyramids and Cones

p 436-446      7.7-7.8

Students will learn how to calculate surface area of cones, pyramids and spheres

Cone

$$SA_T = \pi r s + \pi r^2$$

Pyramid

$$SA_T = \frac{P_a}{2} + \frac{P_s}{2}$$

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Sphere

$$SA_T = 4\pi r^2$$

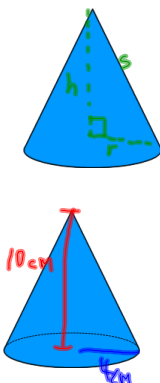
Square Based Pyramid

$$SA_T = 2bs + b^2$$

$$s = \sqrt{h^2 + r^2}$$

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$A_T = \pi r s + \pi r^2$



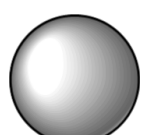
$s^2 = h^2 + r^2$   
 $s = \sqrt{h^2 + r^2}$   
 $s = \sqrt{10^2 + 4^2}$   
 $s = \sqrt{116}$   
 $s = 10.7$

$SA = \pi r^2 + \pi r s$   
 $= 3.14(4)^2 + 3.14(4)(10.7)$   
 $= 3.14(16) + 134.39$   
 $= 50.24 + 134.39$   
 $= 184.63 \text{ cm}^2$

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Calculate the Surface Area

$d = 3\text{m}$



$r = 1.5$

$$SA = 4\pi r^2$$

$$SA = 4(3.14)(1.5)^2$$

$$SA = 4(3.14)(2.25)$$

$$SA = 28.26 \text{ m}^2$$

May 22-8:02 AM

p 439-440

a 1b, 4 b) c)

p. 445 q. 1 b) 5, 7

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